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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,782	03/24/2004	Masao Uyama	CFG03444US	6016

7590 07/26/2005

Canon U.S.A. Inc.
Intellectual Property Department
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EXAMINER	
SMITH, RICHARD A	

ART UNIT	PAPER NUMBER
2859	

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/808,782	UYAMA, MASAO	
	Examiner	Art Unit	
	R. Alexander Smith	2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-20 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 6 and 13 are objected to because of the following informalities:

Claim 6: "the reference value" in line 3 lacks antecedent basis.

Claim 13: "the reference value" in line 3 lacks antecedent basis.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-9 and 11-20 are rejected under 35 U.S.C. 102(b) as being anticipated by 20020025173 to Isobe et al.

Isobe et al. discloses an image forming apparatus comprising:

- a developing device (90) comprising a developing receptacle configured to accommodate a developer including a toner and a carrier, and a detector [0164] configured to output a signal corresponding to a toner density of the developer within said developing receptacle;
- a replenishing member (120) configured to perform replenishing operation that replenishes the toner to the developing receptacle in accordance with an output value from the detector;
- a first storage unit having a storage region configured to store information relating to characteristics of the developer (abstract); and
- a controller (430) configured to control the replenishing operation by said replenishing member based on the output value from the detector and the information relating to characteristics of the developer;
- said controller controls the replenishing operation based on the output value from the detector and a predetermined reference value and corrects the reference value using correction information based on the information relating to characteristics of the developer;
- the correction information is a correction table for correlating an environment or an amount of use of said developing device with an amount of correction for the reference value [0367-0368];
- an environment detection sensor [0363-0370] for detecting an environment within said image forming apparatus, wherein said controller corrects the reference value using information relating to the environment from said environment detection sensor,

information relating to an amount of use of said developing device, and the information relating to characteristics of the developer;

- said first storage unit further includes a storage region configured to store the information relating to the amount of use of said developing device [0082-0085];
- a second storage unit [0068-0085] having a storage region storing correction information for correcting the reference value, wherein said controller selects the correction information stored in said second storage unit based on the information relating to characteristics of the developer stored in said first storage unit, and corrects the reference value based on the selected correction information;
- said developing device is detachably mountable in a main body of said image forming apparatus [0089], and wherein said first storage unit is provided in said developing device;
- a cartridge [0089] comprising at least said developing device and an image bearing member is detachably mountable in said image forming apparatus, and wherein said first storage unit is provided in said cartridge;
- said first storage unit further includes a storage region storing an offset value for the reference value (via the deltaX and/or the correction constant in 0085), and wherein said controller controls the replenishing operation based on the offset value and the information relating to characteristics of the developer;
- said detector being an inductive sensor configured to output a signal;

- a developing receptacle configured to accommodate a developer including a toner and a carrier; a detector configured to output a signal corresponding to a toner density of the developer within said developing receptacle; and a storage medium configured to store information relating to said developing device, wherein said storage medium includes a first storage region configured to store information relating to characteristics of the developer used for supplying the developing receptacle with the toner;
- said storage medium further includes a second storage region configured to store information relating to an amount of use of said developing device, and a second storage region for storing information relating to an amount of use of the developing device [0082-0085];
- wherein the information relating to the characteristics of the developer is information for selecting correction information for correcting the reference value of said detector stored in storage means provided in said image forming apparatus, and wherein the information relating to the characteristics of the developer is information for selecting correction information for correcting a reference value of the detector stored in storage means provided in the image forming apparatus [0068-0085];
- wherein said storage medium further includes a third storage region for storing an offset value for a reference value of said detector (via the deltaX and/or the correction constant in 0085 and the third region being the portion of the first and/or second where the values are stored); and
- wherein said storage medium further includes a communication portion for communicating with said image forming apparatus (figure 1).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Isobe et al. in view of U.S. 6,839,245 to Shida et al.

Isobe et al. teaches all that is claimed as discussed in the above rejections of claims 1-9 and 11-20 including that the detector is an inductive sensor.

Isobe et al. does not teach that the detector is a permeability sensor.

Shida et al. discloses that toner concentration detector is inductive and also a permeability sensor (column 2, lines 25-40). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to make the inductive sensor, taught by Isobe et al., to be an inductive permeability sensor, as taught by Shida et al., in order to measure the toner concentration using a commonly available sensor for determining concentration.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. The prior art cited in PTO-892 and not mentioned above disclose related apparatuses, developing devices and storage mediums.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. Alexander Smith whose telephone number is 571-272-2251. The examiner can normally be reached on Monday through Friday from 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F. Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

R. Alexander Smith
Primary Examiner
Technology Center 2800

RAS
July 22, 2005